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INSANITY;

ITS NATURE, PATHOLOGY, AND TREATMENT.

BY

EDWARD C. MANN, M. D.,

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From the earliest period in the history of medicine, mental diseases have been recognized, more or less classified and treated, as a rule, as worthy of the utmost attention that science and humanity could dictate. As far back as the days of Hippocrates, insanity was recognized as appearing under different forms and conditions of mind. Hippocrates, in writing of insanity, mentioned three states in which mental disease was manifested: mania, melancholia, and dementia. Celsus also recognized three kinds of insanity. The old Roman laws divided the insane into two classes: *furiosi*, those who were violent and maniacal; and *mente capti*, those who were suffering from dementia, or weakness of intellect. The ancient writers, although very crude in their ideas of insanity, recognized, as a rule, the different mental states accompanying mania, melancholia, and dementia. Different writers, in modern times, have attempted various methods of classification; but the simple and yet comprehensive one of Pinel has really been the foundation-stone on which all succeeding writers have reared their modern systems of classification. The classification just alluded to includes the four great primary mental states or conditions of insanity, namely: mania, melancholia, dementia, and idiocy. As most writers on insanity prefer to enlarge

on such simple classifications, and elaborate them somewhat, the question arises, What are the best grounds on which to found our classification? This question has been ably answered by many writers. The etiology, or causes of insanity, has been made the basis of two very excellent classifications; the first, by Dr. Morel, in his "Traité des Maladies Mentales," published in 1860; and the second, a later and more elaborate one, by Dr. Skae. The International Congress of Alienists, at their meeting in Paris, in 1867, adopted a combination of the etiological and symptomatological methods under seven heads: 1. Simple Insanity; 2. Epileptic Insanity; 3. Paralytic Insanity; 4. Senile Dementia; 5. Organic Dementia; 6. Idiocy; 7. Cretinism. Drs. Bucknill and Tuke, in their "Manual of Psychological Medicine," third edition, 1874, have adopted a combination of the symptomatological and psychological method of classification. They have divided it under five heads, or divisions, as follows:

I. Idiocy, Imbecility, and Cretinism; states of undeveloped intellectual power.

II. Dementia; a state in which the intellectual power has been destroyed.

III. Delusional Insanity; under which head they embrace all states in which marked delusions are present: melancholia, with delusions; monomania, with delusions; and homicidal and suicidal insanity, with delusions.

IV. Emotional Insanity, or morbid states of the emotions, without delusion, whether attended by melancholia or excitement.

V. Mania. In conclusion, it is remarked that "all these forms or varieties of insanity are liable to complication with epilepsy, or, if acquired, with general paralysis."

These classifications are for the most part excellent for study; but, for actual practice, the simpler the classification the better for the general practitioner.

Etiology.—In the study of mental diseases, the first great question that naturally presents itself to the mind is, What are the causes of insanity? As in all other diseases, we find them to be both predisposing and exciting. The first and great pre-

disposing cause is, hereditary predisposition. This has been noticed from the earliest history of the study of insanity. Esquirol observed and traced hereditary predisposition in about one-fourth of all his cases of insanity. Guislain estimated hereditary predisposition at thirty per cent. of all cases of insanity. Michéa gave the opinion that at least one-half if not three-fourths of all the insane have either had at some past time, or have at the present time, some cases of insanity in their families. At the York Asylum, during twenty-seven years, from 1846 to 1872, hereditary predisposition was traced in thirty-one per cent. of all the admissions. With regard to hereditary predisposition, it has been determined that, as a general rule, if the mother is insane, the disease is more frequently transmitted to the offspring than if the father be affected; and also, the mother's influence in transmitting insanity to girls is much more to be dreaded than if the offspring be a boy; likewise, as regards the father, insanity being much more certain to appear in male offspring, the father being affected, than in the female. There are, of course, many exceptions to this rule; but the laborious researches of M. Baillarger have been accepted by the best authorities as highly probable, if not conclusive. It has also been proved that the lower forms of insanity, as imbecility, and also depression of mind, are in a marked degree hereditary. It has been remarked that the outbreaks of insanity, in persons who inherit a predisposition to it, generally make their appearance, and seem to be in some manner connected with, the growth and processes of evolution of the individual, as the periods of puberty, childbirth, climacteric period, etc.

Insanity also may appear either in the same form in succeeding generations, or it may assume an entirely different form of insanity, or even of nervous disease. Thus, it is common to see cases in which, the parent suffering from mania, the offspring may develop symptoms of epilepsy or chorea. Some authors have held that nothing was transmissible to the offspring but an aptitude, or predisposition, to some disease of the nervous system, and that the development of any particular type or form of nervous disease was largely the result

of circumstances subsequent to birth. The diseases most frequently presenting themselves as the result of hereditary predisposition have been found to be, aside from the typical forms of insanity, hypochondriasis, apoplexy, paralysis, epilepsy, convulsions, chorea, hysteria, and neuralgia. Undoubtedly, next to hereditary predisposition, may be ranked, in the present day, as a predisposing cause of insanity, the great mental activity and strain upon the nervous system that appertain to the present age and state of civilization. The same feverish haste and unrest which characterize us as a nation to-day, and the want of proper recreation and sleep, tend to a rapid decay of the nervous system, and, sooner or later, the most overworked and overstrained minds stagger beneath the excessive burden; and, one by one, brilliant intellects and sterling men are lost to the world, who, if they had exercised moderation in their respective pursuits, might have been spared for years to enjoy the fruits of their industry. Among other predisposing causes may be mentioned those included by the International Congress of 1867, namely, great difference of age between parents; influence of sex; of surroundings; convulsions, or emotions of the mother during gestation; epilepsy; other nervous diseases; pregnancy; lactation; menstrual period; critical age; puberty; intemperance; venereal excess; and onanism. Among the exciting causes of insanity may be mentioned—trouble, and excessive grief; intemperance; excessive excitement, of whatever kind; epilepsy; disordered functions of menstruation; pregnancy; parturition; lactation; fevers; injuries to the head or spine, and overwork. With regard to intemperance, it has been calculated that from twelve to twenty per cent. of most admissions to asylums are from this cause. It is a fact of importance that the children of habitually intemperate parents often inherit a predisposition to mental diseases, which generally appear in the form of weakened mental faculties, as in dementia, or that they are entirely wanting, as in idiocy. Domestic troubles and griefs are a frequent cause; and it is roughly estimated that from twelve to fifteen per cent. of admissions are from this cause. Under the head of exciting causes are also included physical causes,

as artificial deformities of the cranium, organic disease of the brain, etc.

When we see how readily and inevitably the future mental state and characteristics of the next generation are determined by the health and proper mode of living of the present one, it behooves all physicians, who, perhaps, more than any class of men, are placed in the closest and most confidential relations to their fellow-men, to endeavor to promote such modes of living and thinking, that the descendants of the present generation may be the gainers, and not the losers, by their advice. The very mental states and emotions of a pregnant woman are indelibly impressed upon the offspring; and how important it is that the condition of such a woman should be expressed by the old motto, *Mens sana in corpore sano!* Herbert Spencer, in speaking of the emotions, remarks: "We know that emotional characteristics, in common with all others, are hereditary; and the differences between civilized nations, descended from the common stock, show us the cumulative results of small modifications hereditarily transmitted. And, when we see that between savage and civilized races, which diverged from each other in the remote past, and have for a hundred generations followed modes of life becoming ever more unlike, there exist still greater emotional contrasts, may we not infer that the more or less distinct emotions which characterize civilized races are the organized results of certain daily repeated combinations of mental states which social life involves? Must we not say that habits not only modify emotions in the individual, and not only beget tendencies to like habits and accompanying emotions in descendants, but that, when the condition of the race makes the habits persistent, this progressive modification may go on to the extent of producing emotions so far distinct as to become new; and if so, we may suspect that such new emotions, and by implication all emotions, analytically considered, consist of aggregated and consolidated groups of these simpler feelings, which habitually occur together in experience; that they result from combined experiences, and are constituted of them?"

Diagnosis.—The next question which engages our attention

is the diagnosis of insanity, and here not only the astute and experienced physician is needed, but he must also bring to bear upon the case all his knowledge of human nature, and must be a good physiognomist, as very often he will be compelled to make up his mind as to the sanity of his patient by his own unaided resources, depending entirely upon the conduct, conversation, and appearance of the individual. It is often extremely difficult to obtain any thing like a complete or satisfactory history of the patient; as the friends, disliking to acknowledge a taint of insanity in their family, considering it a disgrace, will deny the fact of hereditary predisposition, which is one of the most important facts relating to both diagnosis and prognosis. The question relating to the existence of previous attacks is also one of the most important points to the physician, and it has been remarked that the two facts as to hereditary predisposition and previous attacks are to the diagnosis of insanity what the fact of hæmoptysis is to the diagnosis of consumption. There is often an entire change, in persons becoming insane, as to habits and disposition. One marked case of a young girl, who is at the present time under our charge, may serve to illustrate the diagnostic value of such changes. The young person just alluded to belonged to a healthy family, but her grandfather had suffered from acute melancholia. Her father and mother were both perfectly healthy. She was religiously inclined, never omitted prayers, and was regarded by her friends as in every respect a model young girl. About six months ago, she exhibited an utter change in her habits and actions, from no assignable reason. She talked and acted very strangely, and once or twice undressed herself and persisted in remaining in this condition. She refused to attend church, and, from being a quiet and well-behaved young lady, became precisely the reverse. Upon being called upon to give an opinion in the case, after carefully watching and conversing with her, and finding that her grandfather had been insane, and noting the symptoms above alluded to in her behavior, we pronounced her insane, an opinion which an attack of acute mania, within a week from the time of examination, fully confirmed. There are sometimes marked peculiarities of dress, manner, and gesture, in the insane, which

are important when taken in connection with hereditary predisposition, as diagnostic symptoms. As regards the bodily health of the patient, it is important to discover whether there are symptoms of gastric, hepatic, or uterine disease; for, although the mere existence of these difficulties would by no means indicate that a person suspected was really insane, yet, as they are sometimes the remote causes of cerebral disturbance, a proper attention should be paid to them as aids to diagnosis. Regarding the insane physiognomy, it has been noticed that there is oftentimes a marked want of accord in the expression of the different features. To a practised eye, the facial expression in cases of acute melancholia and dementia is easily recognizable. In dementia all lines of expression disappear, and the meaningless laugh and stare, and vacant expression, indicate clearly the nature of the disease. On the other hand, mental disease in some instances leaves no imprint whatever on the features, by which to distinguish the mental state. It is generally easy to recognize acute mania by the symptoms accompanying it: loss of sleep, incoherence of speech, violence of action, hallucinations and delusions, being the most prominent symptoms. In melancholia, the symptoms most frequently met with are sadness, depression of mind, and fear. The expression, too, is very characteristic in this form of insanity. The sadness of countenance, dry and harsh skin, want of clearness in the complexion, and in some instances the terrible expression of fear and dread, which spreads over the patient's face, are perfectly diagnostic marks of melancholia, which are not to be mistaken. In the general paralysis of the insane, the slurring speech, peculiar gait, muscular tremor and trembling of the lips while speaking, are all signs not to be mistaken when once seen.

Prognosis.—The prognosis of insanity is a question of much interest, and is often a very difficult point to determine. The cases most unlikely to recover are those in which the insane temperament or diathesis is clearly manifested, and who inherit a predisposition to disease. Such patients, although they may have lucid intervals, rarely if ever entirely recover. The other types of insanity in which we rarely see cures are imbecility and idiocy, dementia, general paralysis (which is one of

the varieties least amenable to treatment) and epileptic insanity. On the other hand, acute mania, acute melancholia, hysterical insanity, and puerperal insanity, not unfrequently completely recover. The first symptoms of recovery are the return of natural tastes, inclinations, and affections, in the patient. Drs. Bucknill and Tuke, in speaking of symptoms of recovery, lay down the following as evidences of restoration of the mind: 1. A natural and healthy state of the emotions; 2. The absence of insane ideas or delusions; 3. The possession of sufficient powers of attention, memory, and judgment, to enable the individual to take his part as a free member of society; 4. Tranquil and reasonable conduct, and say regarding them, "When these four symptoms of recovery coexist, there can be no doubt that recovery has taken place."

Pathology of Insanity.—Owing to the great difficulty and labor incident upon making a thorough examination of the brain in cases of insanity, the pathology of insanity is as yet in its infancy; but already valuable information has been obtained by microscopical investigations, and much more will doubtless be discovered in a few years of microscopical research. Regarding the existence of morbid changes in the brain accompanying mental disease, Portal wrote as follows: "Morbid alteration in the brain and spinal marrow has been so constantly observed, that I should greatly prefer to doubt the sufficiency of my senses, if I should not at any time discover any morbid changes in the brain, than to believe that mental disease could exist without any physical disorder in this viscus, or in one or other of its appurtenances." M. Parchappe, the Inspector-General of Asylums in France, has made very careful and thorough investigations regarding the pathology of insanity, and published the following conclusions: That the pathological changes met with in insanity may be divided into three classes: those which may be considered accidental; those which are found in other diseases, yet appear to be concerned in the production of insanity; and, lastly, those which he considers as essential to mental disease. Among the first he mentions cerebral hæmorrhages, softening of the white substance, and disease of the cerebral arteries. Among the second, thickening and opacity of the arachnoid, hyperæmia

of the pia mater and of the brain, serous infiltration of the pia mater, and collections of fluid in the arachnoid cavity. Under the last head, or the changes considered essential to mental disease, he mentions subarachnoid ecchymosis, and a partial punctiform injection of the cortical surface, with or without softening, extended softening of the middle portion of the cortical substance, adherence of the pia mater to the surface of the brain; rose, lilac, and violet-colored discoloration of the cortical substance, loss of color of the cortical substance, atrophy of the convolutions and induration of the brain. In conclusion, M. Parchappe remarks that in acute insanity the prominent alterations are hyperæmic conditions, with arachnoid ecchymoses and injection and softening of the cortical substance; while in chronic insanity the predominant alterations are atrophy of the convolutions and induration of the two substances. Griesinger, the eminent Berlin pathologist, gives, as the result of his labor in the pathology of insanity, the following morbid conditions: hyperæmia of the brain and membranes, thickening and opacity of the membranes, softening of the cortical substance, and pigmentation of the cortical gray substance in acute insanity; while in chronic insanity the principal lesions he noticed were opacity and thickening of the membrane, atrophy of the brain, particularly of the convolutions, chronic hydrocephalus, effusions into the subarachnoid space, pigmentation of the cortical substance, and extended and profound sclerosis of the brain. He remarks that in chronic insanity softening is not so frequently met with in the superficial layer as pigmentation, superficial induration and adhesion of the pia mater.

Histology.—The microscopical investigations of the histologists of the present day have done a great deal in revealing the morbid histological changes which take place in insanity. Regarding the condition of the membranes, it has been found that, while the dura mater is rarely thickened, its vessels are dilated and irregular, and that the coats of the vessels are much hypertrophied. The arachnoid has been found by Meyer to be often covered with fine granulations on its surface, and it has also been found to be the seat of hæmorrhage, and also thickened. The pia mater has often been found

thickened, and a hyaline appearance has been noticed around the vessels, which has been attributed in part to the action of reagents. Dilatation of the vessels has also been noticed. In a microscopical preparation, from a case of chronic insanity, in the possession of the writer, the thickening of the pia mater is very marked, and a cut vessel presents very beautifully the marked thickening of the coats. The brain-substance in the same specimen is seen to be dilated where it surrounds the vessels. In another preparation, from a case of chronic mania, the only abnormal appearance is a deposit, scattered throughout the brain-substance, of newly-formed cells containing a nucleus and nucleolus, which show very clearly when viewed with a quarter-inch objective, carmine staining having been employed. The pathological changes observable at the *post-mortem* examination of this case were atrophy of the brain and convolutions, and partial sclerosis of the brain, with thickening of the membranes and slight subarachnoid effusion.

The blood-vessels of the brain have been found to present thickening of the coats, thickening of the sheath or hyaline membrane, deposits between the adventitia and sheath, and proliferation of nuclei. The neuroglia has been found to be the seat of various lesions in insanity, the principal of which are disseminated sclerosis or gray degeneration, atrophy, miliary sclerosis, and colloid degeneration. The cells are the seat of atrophy, pigmentary, granular, or fuscous degeneration, calcification, and hypertrophy. Microscopical examination of the spinal cord in the insane has not revealed any particular lesion except in general paresis. Dr. Westphal describes an atrophied condition of the cells of the posterior columns in general paresis and an increase of the connective tissue, commencing externally and extending inward. Dr. Tuke says that, in most cases of general paralysis which he examined, the cells of the cord were found undergoing the fuscous, granular degeneration before alluded to as affecting the cells of the hemispheres and corpora striata. The cells of the cervical sympathetic have also been found undergoing pigmentary granulation in general paralysis, and also in other forms of insanity.

Treatment of Insanity.—Although it is not generally so

regarded, insanity is one of the most curable of serious diseases if promptly cared for and treated. The mistake which is committed every day by foolish friends and relatives, of keeping secret as long as possible the fact of the patient's insanity, thereby depriving him of the necessary care and treatment at the outset of the disease, is often fatal to the prospects of recovery of the unfortunate patient, who is only sent to an asylum when he has become perfectly unmanageable, and the disease has become deeply seated. It has been stated by eminent authority that if persons who were attacked by this disease were cared for as promptly as if they were suffering from an attack of dysentery or fever, eighty or ninety per cent. could be restored to health and usefulness. There is no disease, however, which develops more rapidly if not treated, and tends to induce organic degeneration which renders it incurable. From a financial point of view it pays well to restore the insane as soon as possible to usefulness and health, and thereby save the Commonwealth the cost entailed by the loss of his labor, and also the amount that has to be paid for his board and clothing, which at the lowest estimate amounts to not less than $156 a year, or $3 per week. Dr. Edward Jarvis, of Dorchester, Mass., who has made very laborious investigations upon the subject, in a paper entitled "The Political Economy of Health," presents the following view of the gain or loss entailed upon the State or family of an insane man by his cure, or by his remaining a lunatic for the period of life left to him after his attack. According to Mr. John Le Copelain's table, showing the average longevity of the insane from any given age, it is seen that a man of twenty years of age, if sane, has an average life of 39.48 years, while if insane he has but an average life of 21.31 years if not restored to health. Dr. Jarvis has estimated that, leaving out of sight the ten or twenty per cent. of the insane who are incurable, the average time for restoring to health the insane who apply for treatment upon the early symptoms of disease is twenty-six weeks. At $4 per week, which was the average cost in the three State Lunatic Asylums in Massachusetts for the past year, this amounts to $104, to which is added $30 for each patient, for the cost of rent or interest on the value of the

hospital, etc., for six months, making an average cost of $134 for restoration to health. If not restored to health, the family or State must be at an expense of $156 a year for 21.31 years, and must also lose the patient's earnings for the 39.48 years which he would have made if well. The cost of the patient's support is estimated at $2,121, while the loss of his future labor, if he becomes insane at twenty years of age, is estimated at $2,665.37, making a total loss of $4,786.37 if not cured; while, if cured in the average time of twenty-six weeks at a cost of $134, there will be a gain to the family or to the State of $4,652. The foregoing is an admirable argument for sending insane patients to be treated in the early and curable state of the disease, and, if acted upon, would reduce by a large percentage the incurable cases which are now to be found in such great numbers.

In ancient times the insane were regarded as possessed with devils, and were accordingly fastened with chains, handcuffs, and fetters, and confined in cages or dungeons, to drag out their miserable lives as best they could.

As, in the commencement of this paper, we have seen that Pinel was one of the first to properly recognize and classify insanity, so in speaking of treatment we would refer to him, in his humane endeavors and successful efforts to do away with the beating and cruel treatment of the insane, as he has elsewhere aptly been termed, "The Father of the Modern Treatment of Insanity." His pupil, Esquirol, also was the most successful of his immediate successors in carrying out Pinel's ideas in treating insanity and in advancing the scientific knowledge regarding it. The treatment of insanity has improved up to the present day, and the success which has been reached, in abridging maniacal attacks and warding off dangerous excitement, gives us to-day a much different class of patients both in behavior and appearance than could have been found fifty years ago. This change, which has taken place gradually, as the natural result of improved modes of treatment, has not been fully recognized by the profession at large, as the following may serve to illustrate: A physician of large practice visited the asylum under our charge, a short time ago, and, after having been conducted through the vari-

ous wards of the institution, and noticing the women quietly sewing or reading, while many of the male patients were engaged in out-of-door employments, supposing that only the quiet and convalescent patients had been shown, as is sometimes the case, desired to see the "raving and dangerous patients," and was exceedingly astonished upon being informed that the ward we had just left was the excited ward of the asylum, as the patients had been quiet and polite, and did not show the maniacal glare and ferocity of manner which he expected to see. We took this astonishment as the highest compliment which the gentleman could have possibly paid us, as our patients as a rule come from the lowest class of society, and are not accustomed to a great degree of self-control even when sane. The foregoing is a very simple illustration of what triumphs kindness and moral and hygienic treatment have achieved over the cruel, harsh, and unsympathizing methods which characterized former times. One great rule to be observed in the management of the insane is, that they are invariably to be treated with kindness and consideration. Their peculiarities should never be lost sight of, but should never be made the topic of conversation or ridicule. In the excited state of the nervous system in the insane, a careless or an unkind word is often deeply felt, and all efforts toward a cure may be rendered futile by the patient perceiving in his physician the want of sympathy and kindness of heart which he, above all others, has a right to expect and demand from us.

The insane are as amenable to kindness, as a rule, as sane people, and will almost invariably repay it by good behavior, while the opposite course is quite as sure to counteract all our efforts in their behalf. As in all other diseases, hygienic influences must be insisted on, and pure air, pleasant surroundings, and good food, are of great importance. The mind, to be normal, must be associated with a healthy physical state, and we must in the treatment of the insane attend primarily to these things, and not by any means regard them as beneath our notice. Many people question the propriety of confining a patient in an asylum, private or otherwise, maintaining that, if they can afford to keep the patient at home and provide medical attendance and an attendant for him, he is much bet-

ter taken care of. This is a very mistaken idea, and one very injurious to the patient himself. One of the most marked characteristics of the insane man is his intense egotism, if it may be so called; or, more properly speaking, it consists, in the language of Dr. Blandford, in an "extreme concentration of the whole thought and ideas on self, and on all that concerns self." At home he is more or less the master of the house, and regards himself, when restrained, as a deeply-injured man, and chafes much more, and is more truly a prisoner, in his own home, than when allowed the comparative liberty of a well-regulated asylum. When in an asylum he loses or merges his identity more or less with his companions, which is an excellent thing for him, as he ceases to be the centre of observation and remark, and is treated and noticed precisely in the same way as are the thirty or forty other patients who are occupants of the same ward. A very striking instance of this kind occurred in a patient of good education who, upon becoming insane, fancied himself the Supreme Being, and insisted upon exercising all the fancied prerogatives of such a being. He became very troublesome and dangerous to those about him, and was entirely absorbed in the contemplation of his own greatness, which idea was fostered by the attention he received and the private room that he occupied. He was accordingly removed from his room to a ward in the asylum containing twenty or thirty other patients, and was given to understand that the amount of his liberty and the privileges which he enjoyed would depend entirely upon his behavior. He at once perceived, and at first angrily remonstrated against, the want of attention paid to his whims and caprices, but soon understood that he was not regarded by the attendants as in any way superior to the other patients, and in their treatment of him was manifested no attention at all to his delusion. Finding his endeavors to exercise his authority fruitless, he gave up his imperious and unrestrained demeanor, and soon submitted quietly to the order and discipline of the institution, and at the present time is one of the best-behaved patients in the ward, rarely recurring to his delusion. Regarding the moral treatment of the insane, the physician's attributes have been well defined by Drs. Bucknill and Tuke,

as follows: "The physician who aims at success in the moral treatment of the insane, must be ready 'to be all things to all men, if by any means he might save some.' He must, nevertheless, have a good backbone to his character, a strong will of his own, and with all his inflections be able to adhere with singleness of purpose and tenacious veracity to the opinions he has on sound and sufficient reasons formed of his patient, and the treatment needed to be pursued toward him. With self-reliance for a foundation to his character, it requires widely-different manifestations to repress excitement, to stimulate inertia, to direct the erring, to support the weak, to supplant every variety of erroneous impression, to resist every kind of perverted feeling, and to check every form of pernicious conduct."

Out-of-door work is very valuable for patients in promoting assimilation and digestion, and strengthening the muscular system, and should be employed whenever practicable. Light work gives the patient something to think about, and occupies his mind in a healthful manner, while being shut up constantly in-doors tends to enfeeble the body, and the mind is occupied too often in revolving the delusions which it should be the aim of the physician to banish as far as possible. As it is impossible for the majority of patients to be employed in this manner, it is desirable to find some light employment in-doors. While it is comparatively easy to find employment for women, such as sewing, knitting, washing, and making dresses, the men are not so favorably situated, as the expense of fitting up workshops is so great, that in most instances it is not considered a sufficiently valuable adjunct to justify the necessary outlay. They may be taught, however, to do light work, such as cane-seating chairs, etc., and in such ways occupy their mind and afford them some muscular exercise, however slight. The foreign asylums have systematized manual labor to a much greater extent than in this country; and some of them, as the asylum of Quatre Mares, near Rouen, do a great deal of work in all the trades. Recreation is also more indulged in than in our asylums. At the Fisherton Asylum, near Salisbury, England, which is a private institution, accommodating about six hundred patients, a separate brick building was erected for the

purposes of recreation. It is one hundred feet in length, by thirty in width. At one end of the interior of this building is a stage fitted up with all the accessories for private theatricals. At the Prestwick Asylum, near Manchester, is a very large and handsomely-painted room, which is devoted to musical and theatrical entertainments. At the Lunatic Asylum at Ghent, the Hospice de Guislain, are four hundred and seventy male patients, who are variously employed in shoemaking, book-binding, combing flax, making twine, weaving cloth, and in carpenter-work and work out-of-doors. There are also rooms for music and smoking. At the asylum at Clarendon, near Paris, are six hundred patients of the paying class, for whose amusement are provided a library and billiard-room. The best of our own asylums afford, however, as good facilities for amusements as the foreign ones, if not on so extended a scale; while the condition of the patients, and their care and treatment are, as a general rule, superior to those of the foreign asylums. The medicinal treatment of insanity consists in removing, as far as possible, all functional derangements of the system which would retard a cure, and endeavoring, as far as possible, to keep up a healthy state of the system by attending to the proper fulfillment of the functions of the body. We must relieve anæmia and hyperæmia of the brain so far as we are able, and treat symptoms as they appear in the course of the disease. Among the most valuable remedies for use in the treatment of insanity may be mentioned opium, hydrate of chloral, hyoscyamus, digitalis, ergot, bromide of potassium, stimulants, and the use of warm-baths. Opium has been called "the sheet-anchor of the alienist physician." The doses of opium require to be large, as the nervous system is singularly tolerant to large doses in acute mania and in some forms of melancholia, while, in advanced dementia and in general paralysis, the experience of observers warns us to be careful in its employment. Dr. Pliny Earle commences with twenty minims of tincture of opium three times a day, and gradually increases the dose until one drachm or more is administered three times a day. Guislain recommends large doses, but commences with two grains, which he increases to ten or fifteen grains, as required. Drs. Bucknill and Tuke relate the case of a carpen-

ter's wife who was affected with suicidal melancholia, who was cured by the administration of large doses of morphia, and who was obliged to take eight grains of the muriate of morphia daily. When taking this enormous dose, she was cheerful and enjoyed good health, her tongue being clean and the pulse good, but when the dose was diminished she again became depressed.

The hydrate of chloral has proved to be a very valuable remedy in the treatment of insanity, often procuring refreshing sleep when all preparations of opium fail. It has been shown to be most useful in mania with sleeplessness and restlessness, in doses of from thirty to sixty grains. The great advantages that it possesses are, that it does not constipate the bowels, does not disturb digestion, the doses do not require to be increased, as is the case with opium, and the sleep produced by it resembles natural sleep more than that produced by most other narcotics. From our own experience, we would decidedly recommend the combination of chloral with morphia, or chloral with hyoscyamus, as being preferable to either alone. In very violent cases of maniacal excitement with sleeplessness and dangerous exhaustion, and weak pulse, a dose of twenty grains of hydrate of chloral and one-quarter of a grain of morphia has produced a long, natural, healthy sleep, from which the patient has awakened refreshed and invigorated, and, after a few repetitions of the dose on successive nights, the symptoms have disappeared, or have been greatly relieved. When the chloral has been given in connection with hyoscyamus in maniacal excitement and sleeplessness, fifteen grains of the hydrate of chloral and one drachm of the tincture of hyoscyamus have been administered at night, and the dose repeated in two hours if sleep was not induced, and the results have always proved the success of the treatment.

The use of digitalis has been advocated by Dr. Lockhart Robertson, and by Dr. Duckworth Williams, his successor, at Hayward's Heath, England. They claim that digitalis is a valuable sedative in both recent and chronic mania, and also when these forms of insanity are complicated with general paresis and epilepsy. The dose they employ ranges from half a drachm to one drachm of the tincture, this dose being con-

tinued for some days and then gradually decreased. Stimulants are necessary to ward off the dangerous stage of exhaustion which accompanies or follows acute maniacal excitement, and is contraindicated only when there is excessive plethora.

The fluid extract of ergot is used to overcome the cerebral hyperæmia, which is an attendant upon many phases of insanity, and acts by exercising a controlling influence upon the calibre of the intercranial vessels by virtue of its power over the non-striated muscular fibres and cells contained in the contractile coats of the vessels. It reduces excitement, shortens the attacks, and widens the interval between them. In epileptic mania it often prevents the recurrence of the attacks, and, in short, does all, and even more, than was first claimed for it by Dr. Browne, of the West Riding Asylum, when he recommended its use in recurrent mania, in chronic mania, with lucid intervals, and in epileptic mania. The dose employed should range from one-half to one fluid-drachm of the fluid-extract of ergot, three times a day for as long a period as necessary to reduce the cerebral congestion. Last, but not least, may be mentioned the use of warm baths, which are of inestimable value in asylum practice. The tranquillizing effect of a warm bath in relieving cerebral irritation and in promoting sleep is often wonderful, after all other means have failed. Patients with excessive maniacal excitement, hot head, dilated pupils, tongue thickly furred, and a high temperature in the axilla, have repeatedly passed a comfortable night, after having remained for half an hour in a warm bath at a temperature of 100°. This, in connection with a dose of chloral and morphia or hyoscyamus, will often suffice for the relief of acute mania if repeated on successive nights, if good, refreshing sleep can be induced. Enough has been said, however, to show clearly that we can lay down no definite plan of treatment for any number of cases, but must, in every instance, if we expect to accomplish a cure, study the constitution and idiosyncrasies of our patient, and treat him accordingly. By so doing, we shall often have the satisfaction of seeing apparently hopeless cases restored to society, and families rendered happy which had been broken up by the visitation of this fearful disease.

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